NAME

Module 16Solving Rational EquationsLesson 2Solving Problems Using Direct
Variation

Lesson Objectives

- Determine whether a function is a direct variation and identify the constant of variation.
- Solve problems using direct variation.

A direct variation involving *x* and *y* is a function in which the ratio $\frac{y}{x}$ is a

nonzero constant

For a direct variation involving x and y, y **varies directly** as x.

In the direct variation $\frac{y}{x} = k$, k is the **constant of variation**

1 Does *y* vary directly as *x*?

X	у	
8	6	
12	9	
15	10	

No, y does not vary directly as x.



Is this function a direct variation?

х	у	
3	15	
5	25	
-2	-10	

Х

3

5

-2

49

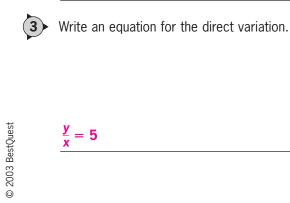
у

15

25

-10

Yes, this function is a direct variation.



Module 16 Lesson 2

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- The distance between cities on a map varies directly with the actual distance between the cities. The distance between two cities on a particular map is five inches. The actual distance between the cities is 65 miles. What is the actual distance between two cities that are three inches apart on the map?
 - 39 miles

5 The time it takes you to hear thunder varies directly with your distance from the lightning. If you are two miles from a lightning strike, you will hear the thunder clap about ten seconds after you see the lightning. How far are you from a lightning strike if you hear the thunder clap four seconds after you see the lightning?
0.8 mile

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Guided Notes

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